

REMARKS

In the Office Action, the Examiner rejects Claims 15-22 under 35 USC §103(a) over Kim et al. ("Attenuating phase-shifting masks of chromium aluminum oxide", Applied Optics, vol. 32, no. 19, July 1, 1998) in view of Fujikawa et al. (JP 01-173718) or Tanaka (US 5,824,197) (and other tertiary references for the dependent claims). These rejections are respectfully traversed.

While Applicants traverse these rejections, in order to advance the prosecution of this application, Applicants are canceling Claims 15-22 and adding new Claims 28-38 to more clearly claim the present invention. It is respectfully submitted that these new claims are not disclosed or suggested by the cited references.

For example, with regard to new independent Claim 28, while Kim may disclose a sputtering down apparatus for depositing a film for a photomask blank and Fujimawa may disclose a sputtering up apparatus with a substrate holder which also shields a peripheral edge of the substrate, none of the cited references discloses or suggest the claimed feature of "a shielding plate for shielding a peripheral edge of the substrate to prevent film deposition on the peripheral edge, wherein said shielding plate is movable so that the shielding plate is removed when the substrate is placed and said shield is replaced with a clearance between the surface of the substrate and the shielding plate for film deposition" as recited in independent Claim 28.

Further, new independent Claim 29 is directed to a DC magnetron sputtering apparatus having a whole-surface erosion cathode and a shield having a shape which has been specialized for the whole-surface erosion cathode so that sputtering can be carried out on the whole surface of the target.

In contrast, while Tanaka appears to disclose an apparatus having a target shield having a concave, curved surface, Tanaka does not disclose or suggest a whole-surface erosion cathode.

Further, the shield in Tanaka does not have a shape such that the position of the shield in the vicinity of the target and the target is of a sufficiently long distance so as to prevent relative film formation speed on the shield from being larger than that on the substrate, as recited in independent Claim 29. As a result, the use of the shield disclosed in Tanaka for a whole erosion cathode may lead to poor results in the manufacturing process.

Accordingly, none of the cited references disclose or suggest the apparatus of independent Claims 28 and 29, or those claims dependent thereon, and the claims are patentable thereover. Therefore, it is respectfully requested that these claims now be allowed.

Conclusion


Applicants respectfully submit that the present application is in a condition for allowance and should be allowed.

If any fee is due for this amendment, or the new claims please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

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Mark J. Murphy
Registration No.: 34,225

COOK, ALEX, McFARRON, MANZO,
CUMMINGS & MEHLER, LTD.
200 West Adams Street, Suite 2850
Chicago, Illinois 60606
(312) 236-8500

Customer no. 000026568